

Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

1-13. (Canceled)

14. (New) Apparatus to generate automatically a mipmap chain of texture images from a portion of texture image data for use in texturing a computer graphic image in a tile based rendering system comprising:

means for supplying scene data;

means for breaking the scene data into a plurality of tiles;

means for storing the data of each tile in a tile buffer;

means for filtering the tile buffer contents for each tile in turn to generate at least one lower level of mipmap data from the scene data;

means for temporarily storing each lower level of mipmap data in the tile buffer; and,

means for storing each lower level of mipmap data in a system main memory.

15. (New) Apparatus according to claim 14 in which a tile buffer is used for temporarily storing image data prior to writing it to a frame buffer.

16. (New) Apparatus according to claim 15 in which the frame buffer comprises a portion of the main memory.

17. (New) Apparatus according to claim 14 in which the filtering means also stores the lower level mipmap in the tile buffer prior to generation of a next lower mipmap level.

18. (New) Apparatus according to claim 15 in which the filtering means also stores the lower level mipmap in the tile buffer prior to generation of a next lower mipmap level.

19. (New) Apparatus according to claim 16 in which the filtering means also stores the lower level mipmap in the tile buffer prior to generation of a next lower mipmap level.

20. (New) Apparatus according to claim 17 in which the process repeats a predetermined number of times until all desired mipmap levels have been generated.

21. (New) Apparatus according to claim 18 in which the process repeats a predetermined number of times until all desired mipmap levels have been generated.

22. (New) Apparatus according to claim 19 in which the process repeats a predetermined number of times until all desired mipmap levels have been generated.

23. (New) A method to automatically generate a mipmap chain of texture images from a portion of image data for use in texturing a computer graphics image in a tile based rendering system comprising the steps of:

supplying scene data;
breaking down the scene data into a plurality of tiles;
rendering the data for each tile into a tile buffer;
for each tile in turn, filtering the tile buffer contents to generate at least one lower level of mipmap data from the scene data;
temporarily storing each level of mipmap data in the tile buffer; and,
storing each level of mipmap data in a system main memory.

24. (New) A method according to claim 23 in which the

step of filtering the texture image data comprises filtering the data from the temporary buffer and storing the thus filtered data in the temporary buffer and in a main memory.

25. (New) A method according to claim 24 in which the filtering step is performed a predetermined number of times until all desired mipmap levels have been generated.